

DEPARTMENT OF THE INTERIOR  
BUREAU OF EDUCATION

BULLETIN, 1925, No. 21

HEALTH AND PHYSIQUE  
*of*  
SCHOOL CHILDREN

BY

JAMES FREDERICK ROGERS, M. D.  
CHIEF OF DIVISION OF PHYSICAL EDUCATION AND SCHOOL HYGIENE

[Advance sheets from Biennial Survey of Education in  
the United States, 1922-1924]



WASHINGTON  
GOVERNMENT PRINTING OFFICE  
1925

ADDITIONAL COPIES  
OF THIS PUBLICATION MAY BE PROCURED FROM  
THE SUPERINTENDENT OF DOCUMENTS  
GOVERNMENT PRINTING OFFICE  
WASHINGTON, D. C.  
AT  
10 CENTS PER COPY

# HEALTH AND PHYSIQUE OF SCHOOL CHILDREN

By JAMES FREDERICK ROGERS,

*Chief of Division of Physical Education and School Hygiene*

---

CONTENTS.—School housing—Playgrounds—Medical inspection—Dental work—Nutrition—Open-air schools and open-window rooms—The summer camp—Other special schools and classes—Health education—Physical training—Safety and first aid—Preschool work—College health—Health of teachers—Teacher training—Parent-teacher organizations—Legislation—School health agencies

---

## SCHOOL HOUSING

Steady progress in recent years has been made in the safe and healthful housing of school children. From a none too carefully constructed box, poorly lighted, and fitfully warmed by a central stove, which failed in making comfortable the wind-chilled floors; furnished with unsuitable benches and with blackboards which belied the name, and provided externally with toilets which were often striking examples of what such appointments should not be, we have come; in a half century or so, to single or consolidated schools having suitable heating apparatus in the basement, the latest toilet and lavatory arrangements under the same roof, a well-equipped lunchroom, blackboards that are black, abundant illumination, suitable seats, some special features for the comfort of the teacher, and, in a word, all necessary facilities (so far as we can now see them) for the health of all concerned. Many schools have gone still further and have supplied special rooms and equipment for the study of home economics, and have provided materially for the physical development of the child by furnishing gymnasiums, baths, and swimming pools.

In some respects we may have gone too far in the use of creature comforts. We have made use of playrooms and gymnasiums in seasons when the playground would have been far more appropriate, and it has been discovered that frequently the schoolrooms have been kept at such a high temperature as to interfere with the loss of body heat and to cause coincident interference with mental activity.

Perennial reports continue from many quarters of overcrowding and double sessions, and the picture of the safe, sanitary, and well-



equipped school does not hold universally. In many parts of the country deplorable conditions still exist. According to a Parent-Teacher Association survey of the schools of Delaware, "two-thirds of the buildings now in use are violating practically all of the health standards which it is one of the supreme tasks of the school to teach to the children."

The water supply of schools is not always chosen with the care that one would expect. An examination of the supplies of 97 of its rural schools by the State department of health in Connecticut was recently made; of these only 24 were considered satisfactory, and 16 were pronounced unsafe.

#### PLAYGROUNDS

Toward the middle of the nineteenth century the educator, intent on adding new subjects to the curriculum and zealous to increase the intellectuality of his pupils at all costs, lost sight of the importance of the playground and often begrudged the child his two blissful respites, the traditional recess periods. Old school grounds were encroached upon, and with the rising cost of city lots new school sites were limited to little more than a mere space for the building. However, in the last quarter of the past century an effort at rescue of the playground was begun, and with the efficient assistance of the Playground and Recreation Association of America not only is more adequate room for play now included in the newer school-building programs but opportunity is supplied elsewhere and trained organizers and directors of play are widely employed. In many cities the municipal playgrounds are under the control of the board of education and are directed by employees of that department throughout the summer as well as at other seasons. It is the opinion of the superintendents of schools in 91 out of 136 large cities that all playgrounds should be under the supervision of the department of education.

Out of 164 cities affording information on the subject 143 stated that playgrounds are provided for every new school building. Doubtless in many instances there is much to be desired in the size of these grounds, but in at least one State a minimum standard has been set of 2 acres for every one-teacher school, 3 acres for every two-teacher school, 4 acres for every three-teacher school, and 5 acres for every larger elementary school. Ten acres has been set as the minimum for high schools. These dimensions have been greatly exceeded by many schools in more than one State.

Besides furnishing playgrounds, some effort is made to put the grounds in condition for use on as many days of the year as possible and to make use of them under special or regular teacher supervision



not only during the school session but after school and on Saturday. There is no time in the regular curriculum, unless it should undergo radical revision, for an adequate program of physical training, and it is to wisely supervised after-school and vacation activities that we must look for full value in this kind of work.

#### MEDICAL INSPECTION

Medical inspection, or health examination (to use a better term), began a half century or so ago in Europe with the examination of the vision of pupils. In many sections of this country it has not in practice advanced beyond this stage of development, and, although 42 States have laws requiring or permitting medical inspection, it is estimated that half of the children of the country have never so much as had their vision tested. The examination of vision was an acknowledgment that the eye is an essential intellectual tool with which the pupil works and with which he works best when it is most nearly perfect. This idea has not, however, as yet penetrated through the dense layer of materialistic tradition with which all our minds are still incrustated; for many a teacher wastes time and effort year after year working not only with pupils handicapped with defective vision, but with children who are dull because deaf, and stupid because of badly fueled brains.

It is true that the mere removal of defects does not affect the hereditary basis of poor or good intelligence. It is inadvisable, however, to attempt to train children who are mentally hampered by remediable bodily defects; though this is carried on to an incredible extent. There are bright spots, it is true, but the general picture the country over is not what could be wished. In at least one European State every child is thoroughly examined, stripped, by a physician three times in his school life, and oftener if his condition seems to warrant it.

There is no longer need for examination for the mere sake of piling up appalling statistics on the subject of human defects. Whether in city or country, East, West, North, or South, the proportion of physical defects is much the same and is a depressing commentary on the fall of man from physical perfection.

Although the examination by a thoroughly trained physician of each child fully stripped would be the ideal practice, the recent tendency has been to make of the school nurse or the regular teacher at least the preliminary examiner. Even where there are other examiners it is the teacher's business to know the instruments upon which she plays, whether they are at their best and remain at their best. Without the use of any kind of special instrument she should know whether a child is doing good work, whether he shows signs of



defective vision, is dull of hearing, can not breathe through his nose, has decayed teeth, is stooped, or shows other evidence of being improvable. As for the detection of communicable disease, the teacher can be the only first-hand observer, and first-hand knowledge of such conditions is the only kind worth while. It needs only a comparatively brief period of instruction and of practice to make the teacher an excellent examiner, and such training promises to be afforded hereafter in her professional education. It has, in fact, been begun in a few teacher-training institutions.

No matter who makes the preliminary examinations, there is need in every school system of a thoroughly trained and well-paid medical inspector and consultant, for the end of such examination is not to find defects but to decide which need to be removed or improved, and to have something done about them.

In the health examination heretofore the persons most concerned and whose cooperation is most needed—the parents—have been ignored. It is notable that in the past few years this method has been undergoing change, and in some cities, where an invitation has been extended, the parents have been present to the extent of 75 per cent. They furnish to the examiner much valuable first-hand information concerning the child's physical history and reduce the labors of the school nurse whose most important business has been the "follow-up" work of home explanation and persuasion after examinations.

It is a high tribute to the usefulness of the school nurse that, although there has been some diminution in the number of full-time school physicians, the number of nurses has increased in both urban and rural regions; and the number of pupils has, in many instances, been reduced to 1,000 per nurse. The employment of school nurses in rural communities is increasing rapidly, and wherever a sufficiently trained and tactful person has been employed she has been found to be indispensable.

A few years ago the administration of medical and dental inspection was about evenly divided between departments of health and departments of education, but there is an increasing balance on the side of educational authority, especially in small cities. In 80 per cent of cities with a population of 10,000 to 100,000 furnishing information on this subject, the administration of medical inspection is under the department of education. This division has been occasioned by the presence of communicable disease, the management of which always falls within the province of the health officials. As these diseases are stamped out the health work will become more exclusively the field of the department of education, though the crest of the wave of public-health activity itself has become purely educational.



Half of the children of the country are in the rural schools, and though these are not better off physically than their city cousins, health work, except in spots, is far from adequate. It is particularly lacking in organization and direction. In most instances it is still waiting on the progress toward better county or district organization in public-health work, if not in education, and these await the approval of the taxpayer.

It is to be regretted that in this country more men broadly interested and qualified for directing the health activities of schools, both urban and rural, can not be given attractive salaries with sufficient time for research, as the opportunities for valuable investigation are unlimited.

#### DENTAL WORK

There has been a steady development of dental work in schools. In many instances this has been inaugurated by the local dentists, though most satisfactory results are obtained where it has been incorporated as a part of the general health work of the school. Besides the school dentist who attends to fillings, extractions, and alignment, dental hygienists are employed in increasing numbers. In addition to examining and cleaning teeth, these workers assist in the training of the child in the care for the appearance and preservation of these valuable structures.

Mouths which have never been entered by brush or dentifrice may contain the most beautiful teeth, while others which have known the most persistent and approved efforts at artificial cleansing may contain few sound specimens. School work on a large scale has proved conclusively that oral hygiene alone has little effect, at any rate during school life, in reducing the tendencies to decay. On the other hand, recent experiments indicate that the amount of caries is noticeably affected within a few months by the character of the food.

The Children's Bureau, in a study of preschool children in Gary, Ind., found that in those whose diet was almost wholly deficient, or lacked one or more essential food elements, there were 75.6 per cent with carious teeth as compared with 52.1 per cent for others; and in experiments on three groups of 7-year-old children, conducted by Mellanby, Pattison, and Proud in a London hospital, the effect of deficient diet on the extent of existing caries, and on the increase in number of decaying teeth, was evident within a few months.

Though proper nutrition is essential for good teeth, efforts at oral cleanliness are worth while, from the point of view of æsthetics if from no other, and preservation by prompt filling of all cavities is of the utmost importance. The trend, however, in dental prophylaxis is at last toward the removal of the causes of caries through the



use of a diet which will furnish from their prenatal beginning the right materials for the making and maintenance of the teeth.

#### NUTRITION

For nearly a century and a half it has been found advisable in European States to furnish meals for poorly fed pupils, but otherwise the most fundamental subject in hygiene, namely, nutrition, has until very recently been nearly neglected. The efforts at improving the daily food habits of the child constitute the most important movement in health work of the age and give promise of the most far-reaching results not only healthwise but economically. We have hitherto been too much inclined to take it for granted that a child is "well fed if he does not starve" or that any kind of food will do for him. We are much concerned about the kind and amount of gasoline and oil which we put in an automobile, but it has not entered our heads that the amount and character of work of the school child is at all connected with what he has had for dinner, or, as was long ago pointed out by Voltaire, that his disposition depends on his digestion.

In the efforts at improving the nutrition of the more evidently malnourished children, whether selected by crude measure of relative weight for age and height or by the more trustworthy method of a general examination for all the signs of this condition, special classes have been organized and even open-air treatment has been afforded them. The tendency is, however, except in the most serious cases, to go direct to the root of the matter and secure the right feeding and other conditions affecting nutrition for all children in the home, if possible, and give supplemental feeding in the school only where this is deemed necessary for the time being.

Certainly where children have not sufficient time, or where the distance from home is too great for them to return home at noon, a suitable noon lunch, planned and superintended by the teacher of domestic science, is now deemed essential, and this function is made use of not only for mere feeding but as an objective part of the teaching of hygiene. About one-third of all cities are now furnishing this lunch. In rural schools, where suitable provisions for the noon meal are of especial importance, the serving of hot chocolate or soup with the food brought by the child is arranged for, while suggestions to parents and the distribution of such publications on the subject as those issued by the Bureau of Education have made an improvement in the contents of the lunch basket.

#### OPEN-AIR SCHOOLS AND OPEN-WINDOW ROOMS

Open-air schools and open-window classes are a part of the special equipment in about 25 per cent of cities having a population



of 30,000 and more and in about 10 per cent of those from 10,000 to 30,000. The proportion has not increased much in a decade. The success of these schools, which grew out of methods employed in sanatoria for the tuberculous, has, of course, depended on much more than pure or cool air; for extra feeding, rest periods, and a sympathetic atmosphere have been as important factors in the results obtained.

Open-window classes have been used for the same type of pupils where no open-air schools exist or for presumably nontuberculous cases of malnutrition.

As Newmayer says, open-window classes were a "confession that only malnutrition cases shall receive fresh air, and this to be given at times at uncomfortable temperature." It is the duty of educators to furnish such a necessity as pure air at a comfortable temperature to every child in every class. "The lack of fresh air in our schools is an indictment against the designers and builders of our school plants." Even if we furnish a pure and not superheated atmosphere to only our tuberculous children, we shall have to make such conditions for a very large per cent of them.

Children who are suffering from active tuberculosis or other serious chronic diseases have no place even in an open-air school. Their physical care is paramount, and they should be placed in a preventorium or sanatorium, where they can have for 24 hours a day the best conditions for healing and recovery. Even in cases of serious malnutrition (which may often be due to tuberculosis) as much progress will be made if the mental work be made decidedly secondary to physical welfare.

The rulings made in New York City as to cases suitable for open-air schools are as follows:

1. Those who show tuberculous infection but have no sign of active disease.
2. Children exposed to active tuberculosis; particularly those of a marked degree of malnutrition.
3. All definitely arrested cases of pulmonary or other forms of tuberculosis.
4. Marked cases of malnutrition.

Besides learning that pure air and comfortable temperature are essential for body-mind activities, we need to be reminded by the more recent studies of nutrition that "the human flower is, of all flowers, the one which has most need of sunlight." In this connection we may well spend some time in informing ourselves as to the work of Doctor Rollier, of Switzerland, who gives his pupils not only pure air but abundant light and bodily movement. His methods are having an influence in schools in other European countries.



## THE SUMMER CAMP

The summer-camp idea dates back some centuries, but in practice it has only lately had its phenomenal development. Like other schools, it began and chiefly remains a private institution, but it is made use of to an increasing degree as an adjunct of the school for the treatment of tuberculous or malnourished children. In the camp the child, during a season when he is often left too much to his own ill-considered ways, can be placed without thought that he is being schooled, under an ideal régime for health in which every condition from the foundations of diet and rest, up, can be supervised while he is brought into that intimacy with nature, too much lacking in our modern life. This deserves to become a part of the experience not only of the ailing child or the child with well-to-do parents but of every child and at public if not private expense. The cost might be considerable, but the results would be worth it. In 83 cities the camp has established itself as a part of the recreational system, and it only needs to be absorbed by the schools.

## OTHER SPECIAL SCHOOLS AND CLASSES

Besides the open-air schools and classes for those crippled constitutionally by bad feeding or chronic bacterial disease, there has been much progress toward special assistance for those locally crippled in eye, ear, heart, or limb. "Sight saving" or "sight conservation" classes are being established in increasing numbers for children with corneal opacities, pronounced or progressive near sight, or other causes which greatly impair the vision. These classes are given an especially good light; extra large print is used; and the methods of training are especially adapted to these half-blind children.

The number of children who are hard-of-hearing is large, and classes with appropriately adapted methods have been organized in many cities for those children who, because of this defect, can not profit as they should by the regular school activities. A study of best methods of selecting and training such children has recently been undertaken by the American Federation of Organizations for the Hard of Hearing in cooperation with the Bureau of Education.

Children with speech defects are given more attention chiefly through special teachers who work with the children individually or in small classes at special periods in the school day. They help also indirectly by advising the regular teacher as to general methods of handling these children so that they may not suffer from consciousness of their distressing ailments. In the city of Philadelphia 10 of these special teachers are employed.

Children with damaged hearts are given special attention in some of our larger cities by the establishment of special heart clinics



and by placing the children in special classes where their exercise and nutrition can be supervised.

#### HEALTH EDUCATION

Training in the practice as well as in the theory of hygiene (or health education, as it has been called) is widely adopted in the school program, and excellent progress has been made in the perfection of methods for arousing interest and for securing results. This development has been powerfully stimulated by the efforts of the American Child Health Association, the joint committee of the National Education Association and the American Medical Association, the American Red Cross, the National Tuberculosis Association, the National Child Welfare Association, and other private agencies. Such work hinges on the attitude and degree of cooperation of the home, and this fact is still too much ignored. The work of health education has its objective beginning in the first physical examination of the child, and the presence on that occasion of one or both parents should start the welding of a link of mutual understanding as to what the school is driving at when it attempts to improve the child's daily habits. Periodic weighing and measuring of the child serves as a concrete reminder of his bodily being and as a peg on which to hang health lessons that endure.

This work is placed, in many school systems, under the supervision and direction of a special health teacher or of a physical director or nurse well grounded in these methods, and preparation in this subject has been introduced in teacher-training institutions.

Besides the helps for teachers in the practical teaching of hygiene issued by this bureau, we would mention the reports of the conferences on health education held by the American Child Health Association and the report of the joint committee on health problems in education, issued in 1924, and entitled "Health Education."

There has been increasing improvement in the methods of teaching and in the textbooks used in the elementary school. In high schools, however, except incidentally in connection with general science, biology, or civics (none of which subjects are always required of all pupils), the matters of health are too much neglected for subjects of less moment save for obtaining entrance to college.

There is a steady increase in the number of schools making some effort at presenting the facts connected with sex; and, though progress in this direction seems painfully slow, there is promise that schoolmen are coming to the opinion that this subject is of importance and that they can transmit information on human origin with as much success as those to whom the precious task has hitherto been so generously confided.



The teaching of practical home hygiene, the care of children and of the sick, has found a foothold in many schools to the great benefit of all concerned. This work has been furthered in many quarters through the activity of the American Red Cross.

#### PHYSICAL TRAINING

There is a most unfortunate confusion of terms and of understanding as to what is meant by physical education. Whereas in some school systems the words are still applied in their former broad meaning as covering all activities having to do principally with bodily development, health, and efficiency; in others they are applied in a limited sense to those more primitive (but none the less essential) body-mind activities in which the larger muscles are brought into play with coincident exercise of underlying functions.

Taking this subject in its narrower meaning, there has been a decided widening of interest in physical education in the past decade, brought about particularly by the war.

The movement for physical training of children in public schools, which arose in Europe in the early years of the nineteenth century, reached this country in due season. The systems adopted from Sweden and Germany were admirably adapted to fit into the routine order of classroom work. It was asserted and hoped that these exercises would counteract the effects of long sitting and of unavoidable bad posture. It was not likely, however, that gymnastics carried on for a few minutes a day could have much developmental or recreative effect or any great mental or moral influence. In fact, the time element in itself (seldom more than 15 minutes a day) negated any notable influence on physical development. Nevertheless, gymnastic exercises did much good, and were worth all the scant time and effort bestowed on them.

Interschool athletics were pursued in many schools with considerable outlay for coaching and for outfits, but this interest was bestowed where it was least needed from a purely physical standpoint.

The trend has been in late years, so far as the school curriculum and facilities will permit, to add to the formal gymnastic exercises the more natural training afforded by dancing, games, and a general participation in athletics. Methods of classifying elementary and secondary pupils for participation in sports are sought, and rewards of excellence in the way of badges or letters are employed to stimulate interest.

Thirty-three States have passed laws making physical education a part of the school curriculum, and in all but two instances the law is, in effect, mandatory. Fourteen States have appointed State directors, and the preparation of teachers in this subject, as well as



the general organization of this work, is advancing satisfactorily under their direction.

While the content of the course in physical training is broadening, its extent, so far as the school period is concerned, is still small. As a purely instructional exercise perhaps 15 or 20 minutes a day is adequate, but from a "study period" point of view, or rather from a joy-of-living, developmental, and recreative aspect, two hours a day is not too much.

There is a healthy tendency for the educator to view again the recess period with the respect it so long deserved, and some added time is gained for supervised physical activity after school and on Saturdays with direction by special or by regular teachers. Probably the time is not far distant when the special teacher of physical training will begin his work in the afternoon and continue it after school hours and on Saturdays.

The development of playgrounds and swimming pools, with supervision through municipal or school authorities, has added much to the opportunity for physical and therefore mental and moral health of the school child. According to the last report of the Playground and Recreation Association of America, 711 cities now maintain playgrounds, with an expenditure of more than \$20,000,000 a year for their upkeep and supervision. It is not sufficient that playgrounds should exist. They need to be in charge of well-trained directors.

The value of the summer camp as a place for training in physical education and hygiene has been mentioned elsewhere. It is the missing link between school sessions and is a place for physical education in its fullest sense. It should be made the connecting link for all pupils and not simply for those who can afford the present cost of this experience.

Besides the summer camp, the Boy Scouts, Girl Scouts, and Camp Fire organizations have been of much help in promoting physical and social education during vacation periods, and the work of these organizations is becoming more effective as its leaders are better trained. The Young Men's Christian Association and Young Women's Christian Association remain worthy all-the-year promoters of physical, social, and mental health and development.

Among the notable events along the line of the promotion of participation in sane physical activities has been the birth and development of the Women's Division of the National Amateur Athletic Federation of America. The aims of this organization are to secure the adoption by women of those forms of athletics which seem best fitted for them, to have all such athletics supervised by their own sex, and to encourage research in this field. The division already has



a large membership of colleges and secondary schools throughout the country and promises to be a great power for good.

#### SAFETY AND FIRST AID

In addition to fire drills, the efforts to reduce the number of street accidents has become a fairly necessary part of the school program. The number of accidents from speeding vehicles has been reduced not only by classroom teaching but by closing certain streets for play and the providing of better playgrounds, with special traffic directors in the neighborhood of schools at the beginning and end of sessions.

The teaching of rescue of the drowning and the resuscitation of the partially drowned has been stimulated by the American Red Cross. The subject of first aid has been furthered by the foregoing agency and by the United States Bureau of Mines, as well as independently by the local school nurses and other teachers.

#### PRESCHOOL WORK

Physical examinations with the purpose of finding and securing the cure of disease or removal of hampering defects were first carried on in this country in universities and colleges. From these higher institutions they filtered into the public schools, and after 50 years it is recognized that it would be wisest to extend the privilege of this examination and bodily betterment to children before they are admitted to school. In Germany, for a number of years, children have been examined on entrance to school and if found malnourished or otherwise unfit are returned to their homes until they are in better condition for school work. In this country more forehanded proceedings have been instituted in a few cities by the examination of children previous to entry.

The nursery school, which prior to the war flourished to some extent in England and Scotland under recognition by the educational authorities, has found a foothold recently in this country. It is not to be confused with the day nursery, but is related on the one hand to this institution and on the other to the elementary schools. We quote from the annual report of Sir George Newman, chief medical officer of the English Board of Education:

It will be generally agreed that the best place for the child under 5 years of age ought to be with his mother in his own home, but when the home surroundings are unsatisfactory and likely to retard the physical and mental development of the child a properly organized nursery school would seem to be the most suitable alternative. Such a school should clearly be free from the type of control and discipline which may be appropriate to older children. It should aim primarily at building up physique and fostering the mental growth of the children it cares for by placing them in happy, healthy surroundings where



they will be fed, warmed, and cleansed and taught by homely methods how to help themselves, contract good habits, and respect the wishes and desires of their fellows. \* \* \* It is generally conceded that the nursery school should be in charge of a specially trained, certificated teacher with less highly qualified assistants for nursing and attendance.

Although the health of the child before he becomes a candidate for school may seem beyond the province of the school, it is of the greatest moment from every point of view that the grist which enters the educational mill should be of the highest quality which heredity will allow. It becomes, then, incumbent on the community of which the school is but a part to see that everything possible is done for the preschool welfare of the child.

Besides the nursery school, there have been developed for the earlier care and guidance of the child and his parents, under public-health administration, habit clinics, infant welfare, and maternal welfare clinics, all of which aid in the delivery to the school of better material on which to exercise its very expensive machinery.

#### COLLEGE HEALTH

Attempts at putting and keeping the student in his best condition for school work began in higher institutions for learning. There were giants in such work in those days, a third of a century ago, and the health program in the college and university as carried out in a few schools, such as Amherst, Yale, and Harvard, have been surpassed since in only a few institutions, and in a very large percentage it has not yet been approached.

In the matter of exercise, however, there has been progress in most quarters in furnishing all students with facilities for and in the promotion of intramural sports, financed in part by returns from intercollegiate games.

Of 182 colleges and universities of the first rank about 70 per cent require a medical examination of some kind at entrance. About 60 per cent of the schools of liberal arts of these institutions require physical training for men, and of these, 61 per cent allow semester-hour credit. In the schools for women the percentage is somewhat less. Systematic exercise is required usually in the first two years only, but in some it is required for three or four years.

Although the number of colleges giving instruction in personal hygiene has greatly increased, more than 50 per cent of such institutions of the first rank do not yet offer such a course, and comparatively few present the subject of personal and public health adequately.

Courses having reference to parenthood and the maintenance of a healthy home have been considered foreign to the academic atmos-



phere of the college for women, but the endowment and establishment of a "course in euthenics" at Vassar is seemingly an entering wedge in the direction of education which has a direct bearing on the art of living.

#### HEALTH OF TEACHERS

The health of all workers is looked after to a very considerable extent, and conditions which make for the effectiveness of the teacher are not wholly neglected. The teacher-retirement acts of State and city schools have had their effect in reducing to some extent the anxiety necessarily felt for the future, and anxiety is depressing to physical and mental activities.

Some States and cities have made wise requirements as to the physical condition of teachers, so that the evidently unfit will not fall into an occupation for which they are not well adapted. The schooling in hygiene and physical training which the teacher in training is now receiving also improves her own health.

The improvement in the schools as to ventilation, light, and cleanliness react (unintentionally) for the benefit of the health of the teacher, as do also her efforts at improving the health habits of her pupils. It is easier to work with children who, with a minimum of defects, are clean, well fed, well rested, and sufficiently exercised than with a dirty, malnourished, fatigued, restless, or listless crew.

In providing suitable houses for the teachers in connection with the schools many communities have done much to conserve the energies of the teacher and to improve her work.

#### TEACHER TRAINING

Facilities for training the grade teacher for work in hygiene and physical training are developing slowly. In some States, notably Connecticut, the departments of education are putting into execution very comprehensive courses of training beginning with physical examinations and the requirements that, within a given time, the candidates shall have their physical defects corrected. If such programs are carried out as planned, the teachers of a few years hence will constitute a strong force for improving personal and public health and vigor.

There has been of late a phenomenal growth in size and number of schools giving professional courses in hygiene and physical education. Whereas 40 years ago there were but two schools giving a two-year course in "gymnastics" or "physical training" to a handful of students, some 50 prominent universities and colleges now give courses in hygiene and physical education leading to a degree in this subject, while the number of State normal and of special



schools giving such courses will bring the total of schools to more than 100.

Very few school nurses have had any special preparation for school work, but opportunities for training in public health nursing are increasing in number, and school work is being included in the courses. Special summer courses have also been arranged for in a few instances.

Courses for oral hygienists are now offered in 10 dental schools, and the number of these schools will be increased in the near future.

Most physicians have had to learn the special problems of their school work chiefly through experience, but the trend of medical instruction toward preventive work is fitting them better than formerly for this task. The special schools in public health, which had their beginning in 1906, now number 12, and these are adding a small quota of better trained workers to the public school field.

#### PARENT-TEACHER ORGANIZATIONS

Medical inspection brought the school, of necessity, into contact with the home in a new way. The earlier workers in this field, however, exhibited a strangely indifferent attitude toward those most interested, in that they never invited the parents to be present at the examination of their children. This attitude is, however, now corrected to some extent.

The attempt at modifying the fundamental habits of the child, his eating, sleeping, etc., made it again apparent that we must have the thorough cooperation of the home. By tactful address this can be accomplished to an unexpected degree and with a far-reaching benefit on the home, but again the contact has usually been a distant one.

The parent-teacher association, which has spread so widely, serves everywhere to bring the town and gown together in better understanding and has stimulated and improved school work for health, at the same time making the home more sensible with regard to its obligations toward the work of the school.

#### LEGISLATION

Legislation for health work in the schools in this country may be said to have originated about 40 years ago in the practically universal introduction of the teaching of physiology and hygiene with special reference to the effects of alcohol and narcotics. It was instruction in the effects of these rather than any other feature of hygiene that was aimed at, and the knowledge conveyed as to the mechanism of the human body was incidental.



Legislation for the physical examination of school children began in 1907, when Connecticut made it obligatory for the teachers to test the vision of pupils every three years. At present 42 States have passed laws on the subject. Though in many States the law is only permissive, the majority make it mandatory and specify a full examination.

A State law making physical education a part of the curriculum was first passed in 1904, but up to 1915 only three States had enacted such legislation. The war gave a great impetus in this direction, and by 1924 such laws had been passed by 33 States. In all but two of these States the laws are mandatory in effect. Nearly half of them emphasize the teaching of hygiene, and many of them make provision for teacher training in this work.

Although in 14 States a division of health work under a special director has been created in the department of education, legislation in other States has not led to much improvement of the chaotic condition in the field of general school health administration which exists the country over outside of the cities. To a certain extent improvement along these lines awaits the development of county or district health units.

The operation of the "school hygiene districts," authorized by law of 1924 in New York State, will be looked upon with interest. In such districts—

a committee is created which is authorized to employ a full-time school health director. This committee consists of the city, village, and district superintendents of the district; the chairman of the (county) board of supervisors, and the sanitary supervisor. The county pays one-half of the expense, the State the other half.

In New York \$1,000 State aid is granted to districts that employ full-time medical inspectors and \$700 to districts "that employ full-time dentists, dental hygienists, nurses, health teachers, nutrition or other experts, approved by the commissioner of education."

#### SCHOOL HEALTH AGENCIES

The existence of manifold agencies, public and private, working for the advancement of health work for the school child, evidences great interest in this work on the part of many persons, but at the same time it indicates that such work is either not fully appreciated by the schools or has not yet been assimilated with the mechanism of the school program. The list of organizations which are doing excellent service in promoting health work in schools is a long one.